



ONGARD System Review for Science, Technology and Telecommunications Committee

Energy, Minerals and Natural Resources Department

State Land Office

Taxation and Revenue Department

November 29, 2011



ONGARD Overview & History

- In 1987, a Tri-Agency Natural Gas Task Force was formed to ensure the state is receiving the oil and gas tax and royalty revenues to which it is entitled.
 - The task force objective was to develop a system strategy that would facilitate tracking and verification for production and sale of oil & natural gas resources in New Mexico
- In 1990, the Legislature passed SB333 which funded the development of an oil and gas revenue database
 - To ensure that the tax and royalty revenues associated with oil and gas production in New Mexico were collected in an accurate and fair manner
- The system was implemented in 1995
 - \$399 Million in tax and royalty revenue was collected in FY96
- Since FY96, ONGARD has collected and distributed over \$20 Billion in tax, royalty and SLO leasing revenue
- In August 2007, the ONGARD team received approval for the planning phase of the ONGARD Modernization project.
 - That project was completed on time and on budget (\$500k) but an additional \$1 million in funding that was initially allocated was reverted in the 2009 legislative session, ending the project.

ONGARD Tri-Agency Purpose

- ONGARD supports:
 - State Land Office (SLO) for royalties and maintenance of related trust land leasing (95% of SLO revenues)
 - NM Taxation and Revenue Department (TRD) for taxation
 - NM Energy, Minerals, Natural Resources Department's Oil Conservation Division for permitting & Oil and Gas Reclamation Fund
 - Oil & Gas industry customers
- The ONGARD system enables distribution of the revenues to the various beneficiaries
 - Revenue collection of ~\$1.5 Billion annually (SLO & TRD FY12 estimated collections)
- Tri-Agency collaboration is still unique to NM
 - This is based on discussions with other states in late 2009 (and more recently in 2011) as ONGARD Modernization project was being "mothballed" due to lack of funding

ONGARD FY12 Challenges

- Mainframe computing environment OS & DB upgrades
 - DoIT has undertaken an aggressive program to upgrade mainframe OS and DB which are not supported by IBM due to age.
 - Although ONGARD supports this change, it is presenting unique challenges to the ONGARD staff and the business users.
 - No change to operating environment for many years has led to false sense of safety because no platform changes equates to a “stable system” which doesn’t produce errors.
 - Unusual issues have cropped up in the system since the OS upgrade earlier in 2011 and we anticipate more of these issues to continue as additional upgrades are made
- Mainframe system test and use cases do not exist
 - Although there was testing done during system implementation almost 20 years ago, there were no formal use and test cases developed for the system and there has been little overall testing done with most tests limited to a specific module or Service Request change
 - Because of the changes being made to the OS and DB systems, we need to be able to run full system, use and test cases for the entire ONGARD system—anything less enhances the risk of system problems post DoIT upgrades
 - There are no resources to develop use and test cases—this is true for ONGARD Service Center team members and for end customers in the tri-agencies
 - Without full testing prior to OS & DB changes, we can expect program errors
 - Best practice would be to recompile all ONGARD programs prior to test but cannot proceed with this activity until use and test cases are developed
 - Skills to develop and execute this activity do not exist internally—we will need to use contract resources. Limited operating budget may prevent the hire of qualified resources
- Business logic gaps
 - Business logic and business rule documentation is weak or non-existent
 - Customers have developed work-around procedures for the many system changes requested but not implemented
 - Hundreds of work-around procedures and SRs were collected during the ONGARD Modernization Planning project with few changes made to date
 - Inadequate business and system process to support directional drilling
 - Customer subject matter experts are retiring without completing knowledge transfer

ONGARD FY12 Challenges cont.

- **Budget**
 - ONGARD budget is .13% of total dollars collected; best practice model calls for ongoing investment of 1-8% of revenue stream to maintain system currency and acceptable risk level--three years of budget cuts have added to this problem
 - Depleted budget level too low to support current operational needs
- **Data**
 - Cannot support land subdivision below 40 acres
 - Database schema doesn't match business model
 - Two ONGARD FTEs are dedicated to making data corrections, not writing code
 - Data corrections have soared since the departure of EMNRD OCD team member who functioned as SME on OCD corrections
 - Inadequate system logs only show last update, not a full transaction log
- **Mainframe changes and lack of testing resource**
 - We are not prepared for necessary testing of the OS and DB upgrades
 - No resources (IT and user) available to develop and execute test cases
 - Few test tools available on mainframe
 - DoIT recently ordered a scripting tool to assist in test efforts
 - CA test tool that ONGARD team requested as upgrade will not run on OS version to be installed in Dec 2011
- **Staffing**
 - Only one programmer remains on ONGARD team
 - Limited training in US universities; no H1Bs allowed
 - All ONGARD postings for mainframe COBOL programmers have not found candidates with necessary skills—must now hire contractors but have no budget
 - Have lost 25% of ONGARD staff and 75% of our mainframe resources
 - No raises and increased learned skills on the part of the ONGARD team leaves us susceptible to staff defections to a hot IT job market
 - Lack of available COBOL and mainframe programmers coupled with low salary structure and recent staff resignations have led to a staffing crisis

ONGARD FY12 Risks

- Business Continuity and Disaster Recovery
 - A mainframe outage is a worst case scenario and we could be significantly retarded in our ability to restore or recover since we currently have no plan and have not been able to run tests of our capabilities
 - The aforementioned scenario could lead to lengthy disruption of the ONGARD revenue stream which is 30% of New Mexico revenue
 - Although the ONGARD team continues to work on BC/DR for the server portion of the system, there is NO current (existing plan dates back to Y2K) DoIT mainframe BC/DR plan
 - DoIT has indicated that they plan upgrades in this area but the current situation puts the ONGARD \$1.5 billion revenue stream at significant risk if there is a mainframe failure
 - This problem is magnified by the fact that no testing on mainframe recovery has been done since Y2K
 - Shared problem with other agencies using mainframe
- C-2 funding may not be recommended for ONGARD in 2012 session
 - Lack of funding means that there is no target date for systems relief—this is a major risk for a significant revenue stream that is already in jeopardy
 - Initial November DoIT recommendations do not include ONGARD C-2s
 - There are discussions for alternate funding to redevelop ONGARD from scratch, but these are only in the concept phase
 - ONGARD system is at significant risk of failure without infusion of both operating budget and funding for modernization—current state is critical and not improving

Expected Impact on Agencies

- No funding for required upgrades to current environment for DoIT mainframe upgrade to zOS 1.12
 - ONGARD Service Center does not have resources to support upgrade with recompilation and testing of all ONGARD software
 - TRD is at risk for collection of \$1 billion revenue stream (est.)
 - SLO is at risk for 95% of SLO revenue (est. \$500 million)
 - New Mexico is at risk for 30% of revenue if system fails
 - May have to “toss” ONGARD into new mainframe environment with limited testing if mainframe upgrade is completed in early 2012
 - ONGARD Service Center will be unable to rapidly repair problems detected after the move to a new mainframe due to ongoing staffing shortage
 - Ongoing significant problem resolution issues for all tri-agency customers for any undetected changes in the transition
- No ONGARD C-2 Request Impact
 - Future escalating costs for mainframe services for all agencies involved
 - Ongoing staffing issues for mainframe programmers will be extended
 - No relief for TRD audit point that recommends modernization
 - Must shift ONGARD Service Center to all contractor staffing model ASAP but no budget available for this purpose and no budget expansion request was filed
 - No clear path forward for ONGARD system – again, concepts for funding are being discussed

Questions

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